Tufts University is considered to be in an urban location and is surrounded by the tightly packed neighborhoods of Greater Boston. However, a large portion of its student body comprises of people who love the outdoors and are constantly venturing out to places like Mystic Lake, the Fells, and beyond to try to and escape from the hustle and bustle of city life for a minute. Within this group, there is a large population of runners/bikers.

Currently, there is no reference on campus to introduce students to more serene, rural running/biking routes surrounding Tufts. Therefore, the goal of this project is to find the most scenic and most accessible running/biking routes in the Greater Boston area for Tufts students, meaning routes that pass through the most amount of parks, rivers, and lakes as possible, with the least amount of time spent on roadways and hills.

**Methods**

To begin, the term “best route” was defined as a route greater than one mile in length and within two miles of Tufts’ campus, with the least amount of elevation change (least hilly), least amount of distance travelled on roadways, and maximum amount of distance spent running along rivers, through parks. These were then grouped and symbolized to represent the best route from each category. A digital elevation model for the area was acquired in order to add surface information to each of the routes, thus allowing for the overall sum of all parks, rivers, lakes, and roadways along each route. These were then grouped and symbolized to represent the best route from each category. A digital elevation model for the area was acquired in order to add surface information to each of the routes, thus allowing for the overall elevation change along each route to be calculated and symbolized. The overall rankings were determined by summing the total positive additions to routes (parks, rivers, and lakes) and weighing them against negative additions to routes (roadways, elevation change) in order to find the best overall route.

**Results & Discussion**

When the individual analysis for parks, rivers, lakes, roadways, and elevation were summed and weighted, the overall score of the Fells was highest, with the Minuteman Bikeway ranked as second-best and the Mystic River and Lake trails ranked third-best. One detail to take into account is that the majority of the route data came from Runkeeper routes logged by the researcher. Additionally, the Middlesex Fells trails were only considered to be one singular route in this study, which adds considerable weight to its singular scoring. Lastly, counts for intersections and proximity of parks, rivers, lakes, and roadways to routes were based on hit points, meaning that a route may have only passed through one park, but intersected with it multiple times. This information should be considered for future studies looking more into which trails among those identified by this study truly offer the “best” attributes.